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PATENT

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Haixiang Liang

Title: CATEGORIZATION OF IMPAIRMENTS AFFECTING A
COMMUNICATION CHANNEL

Application No.: 09/627,572

Filed: July 28, 2000

Examiner: Unknown

Group Art Unit: 2734

Atty. Docket No.: 1005-0017

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#4

September 25, 2000

Office of Initial Patent Examination
Customer Service Center
Assistant Commissioner for Patents
Washington, D.C. 20231

PETITION FOR CORRECTED FILING RECEIPT

Dear Sir:

Applicants hereby petition the Commissioner of Patents and Trademarks to correct the
Official Filing Receipt for the above-identified patent application as follows:

- ☐ Correct the Filing Date
- ☒ Correct Continuing Data
- ☐ Correct Applicant(s)
- ☐ Correct Title
- ☐ Correct Attorney Docket Number
- ☐ Other: _____

This Petition is submitted for the following reasons:

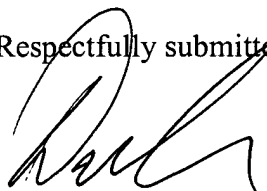
The Continuing Data as Claimed by Application should read as follows: "THIS APPLN
CLAIMS BENEFIT OF 60/146,780 7/31/99" as evidenced by the Declaration For Patent
Application and the first page of the Application that was filed on July 28, 2000. Therefore, it is
respectfully requested that a corrected Filing Receipt be issued.

Attached is a copy of the Filing Receipt having the above-described error(s) and with corrections noted thereon in red ink, as well as the Declaration for Patent Application and first page of the Application. Please issue a corrected Filing Receipt.

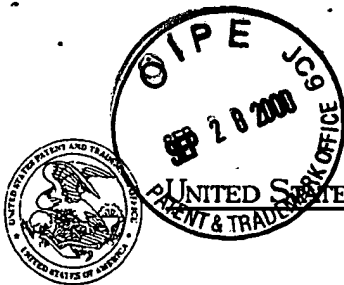
- ☒ As an above-described error is attributable to the Office, no fee is believed necessary. Nonetheless, if a fee is required, the Commissioner is hereby authorized to charge the fee required for this correction to Deposit Account No. 50-0631.
- ☐ As the above-described error(s) was (were) NOT attributable to the Office, the Commissioner is hereby authorized to charge any fees which may be required for this correction to Deposit Account No. 50-0631.

If this request does not lead to the correction of the Filing Receipt, please contact the Applicant's attorney at number indicated below.

Respectfully submitted,



David W. O'Brien, Reg. No. 40,107
Attorney for Applicant(s)
(512) 347-9030
(512) 347-9031 (fax)



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ZAGORIN O'BRIEN & GRAHAM, L.L.P.

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WASHINGTON, D.C. 20231
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APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/627,572	07/28/2000	2734	1224	1005-0017	5	41	5

22120
ZAGORIN O'BRIEN & GRAHAM LLP
401 W 15TH STREET
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AUSTIN, TX 78701

FILING RECEIPT



OC000000005393016

Date Mailed: 09/12/2000

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Haixiang Liang, Palo Alto, CA ;

Continuing Data as Claimed by Applicant

THIS APPLN CLAIMS BENEFIT OF 60/146,780 07/31/99

Foreign Applications

If Required, Foreign Filing License Granted 09/12/2000

Title

Categorization of impairments affecting a communication channel

Preliminary Class

375

Data entry by : RORIE, DEANNA

Team : OIPE

Date: 09/12/2000



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CATEGORIZATION OF IMPAIRMENTS AFFECTING A COMMUNICATION CHANNEL

Haixiang Liang

This patent application claims benefit of U.S. Provisional Application No.
5 60/146,780, filed July 31, 1999.

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to data communications, and more particularly,
to digital impairment learning for pulse-code modulation (PCM) modems used in
10 transmission paths compatible with digital modulation.

Description of the Related Art

Much of the public switched telecommunications network (PSTN) is
implemented using digital data transport. Nonetheless, significant portions of the
PSTN are still based on analog technology. For example, the "local loop" portion of
15 PSTN that connects a telephone subscriber to a central office (CO) is typically an
analog loop. Additionally, analog portions may exist at other points along a
communications path, e.g., as an analog channel in an otherwise digital circuit.

To achieve high downstream data rates in the PSTN, the current generation of
56 Kbps modems no longer treat the communications path as an analog channel.
20 Instead, such modems assume that there is only one (1) analog portion in a
downstream transmission path from a digitally connected server modem to a client
modem connected to an analog local loop. This configuration is reasonable in areas
where most Internet Service Providers (ISPs) and business customers are digitally
connected to the network and allows data signaling rates of up to 56 Kbps in the
25 downstream transmission path.

**DECLARATION FOR PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below adjacent to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of subject matter (process, machine, manufacture, or composition of matter, or an improvement thereof) which is claimed and for which a patent is sought by way of the application entitled

**CATEGORIZATION OF IMPAIRMENTS AFFECTING
A COMMUNICATION CHANNEL**

which (check) ☒ is attached hereto.
☐ and is amended by the Preliminary Amendment attached hereto.
☐ was filed on _____ as Application Serial No. _____
☐ and was amended on _____ (if applicable).

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I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
Number	Country	Day/Month/Year Filed	Yes	No
N/A				

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

Provisional Application Number	Filing Date
60/146,780	July 31, 1999

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56, which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

Application Serial No.	Filing Date	Status (patented, pending, abandoned)
N/A		

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith:

Mark Zagorin (36,067);
Andrew C. Graham (36,531); and
David W. O'Brien (40,107).

Please direct all correspondence concerning this application to the USPTO Customer Number, if provided, or otherwise to the individual and/or firm named below:

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USPTO Customer Number



22120

PATENT, TRADEMARK OFFICE

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole (or first joint) inventor: Haixiang Liang

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Date: 7/28/2000

Citizenship: USA

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